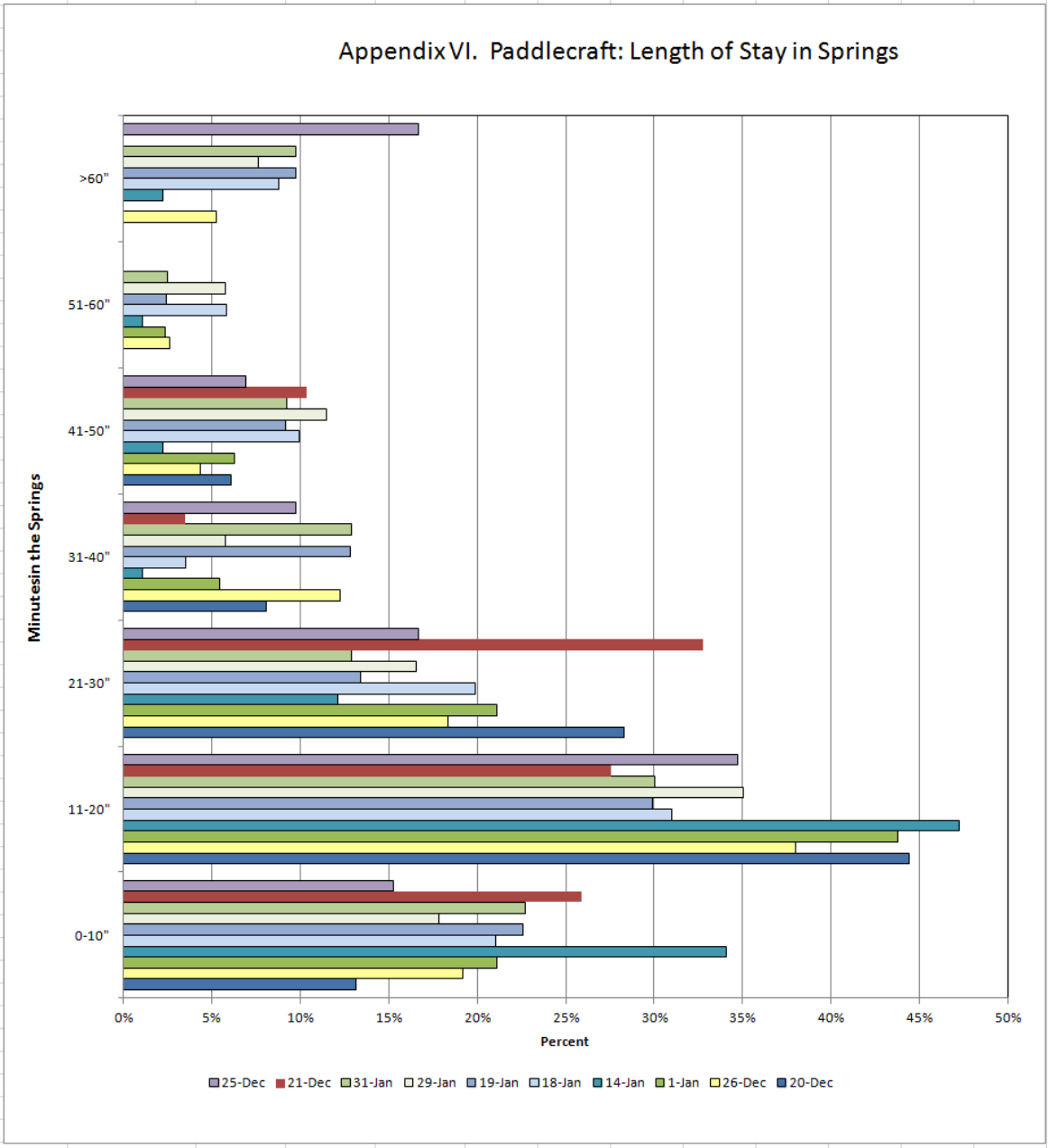
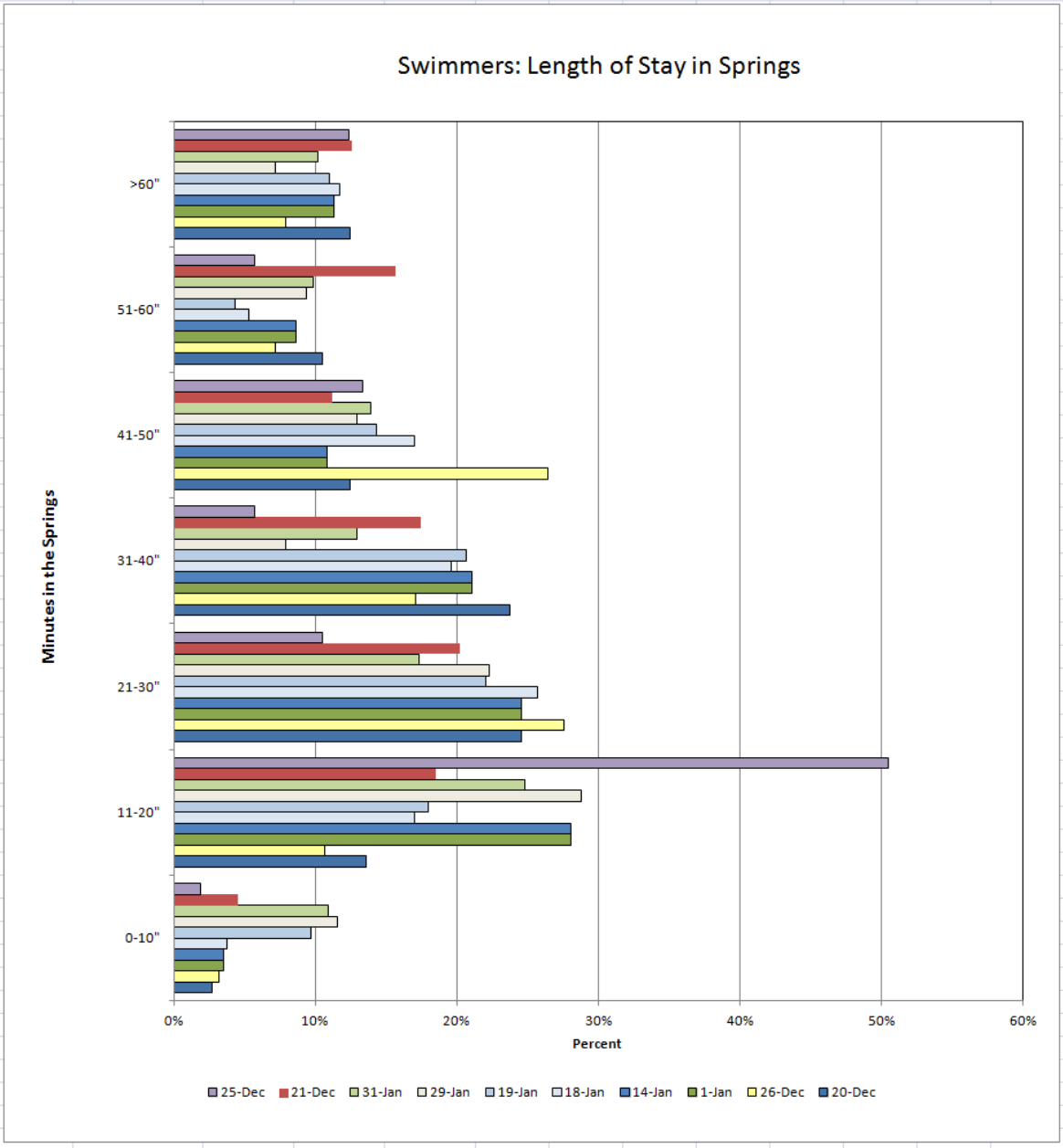
Appendix VI. Paddlecraft: Length of Stay in Springs



	20-Dec	21-Dec	25-Dec	26-Dec	1-Jan	14-Jan	18-Jan	19-Jan	29-Jan	31-Jan
0-10"	13%	26%	15%	19%	21%	34%	21%	23%	18%	23%
11-20"	44%	28%	35%	38%	44%	47%	31%	30%	35%	30%
21-30"	28%	33%	17%	18%	21%	12%	20%	13%	17%	13%
31-40"	8%	3%	10%	12%	5%	1%	4%	13%	6%	13%
41-50"	6%	10%	7%	4%	6%	2%	10%	9%	11%	9%
51-60"	0%	0%	0%	3%	2%	1%	6%	2%	6%	2%
>60"	0%	0%	17%	5%	0%	2%	9%	10%	8%	10%
Number of paddlecraft	99	58	72	229	128	91	171	164	157	134
Daily average (minutes)	0:21	0:20	0:35	0:23	0:19	0:15	0:27	0:26	0:27	0:23
Maximum number of manatees	127	287	105	196	26	22	117	103	85	74
Gulf water temperature at Shell Island	62°F	0:37	0:35	64°F	67°F	62°F	61°F	61°F	61°F	63°F

0:23 minutes average length of stay

77% of boats spend less than 30 minutes in Springs



	20-Dec	21-Dec	25-Dec	26-Dec	1-Jan	14-Jan	18-Jan	19-Jan	29-Jan	31-Jan
0-10"	3%	5%	2%	3%	4%	3%	4%	10%	12%	11%
11-20"	14%	18%	50%	11%	28%	44%	17%	18%	29%	25%
21-30"	25%	20%	10%	28%	25%	19%	26%	22%	22%	17%
31-40"	24%	17%	6%	17%	21%	16%	20%	21%	8%	13%
41-50"	12%	11%	13%	26%	11%	8%	17%	14%	13%	14%
51-60"	11%	16%	6%	7%	9%	2%	5%	4%	9%	10%
>60"	12%	13%	12%	8%	11%	18%	12%	11%	7%	10%
Number of swimmers	257	287	105	533	371	236	530	300	139	294
Daily average (minutes)	0:39	0:37	0:35	0:37	0:30	0:29	0:35	0:33	0:31	0:32
Maximum number of manatees	127	198	80	196	26	22	117	103	85	74
Gulf water temperature at Shell Island	62°F	63°F	66°F	64°F	67°F	62°F	61°F	61°F	61°F	63°F

0:33 minutes average length of stay
63% of swimmers spend 11 to 40 minutes in the Springs
5% of swimmers spend less than 10 minutes in the Springs

Appendix VII. Suggestions to Improve the Boardwalk Experience for Visitors

Nearly one-half of the boardwalk survey respondents provided comments regarding their visit to the boardwalk. The following list represents those comments which likely have practical application to future management plans for the Springs. Some of these comments were repeated a number of times. Comments which we deemed were whimsical, impractical, or simply complaints were not listed.

1. Advise boardwalk visitors to bring polarized sunglasses to better see into the Springs
2. Provide informational signage for plants and wildlife at the Springs
3. Provide more publicity about the Springs
4. Trim vegetation around the Springs to improve manatee watching
5. Expand and complete the boardwalk. Extend the trail to Magnolia Springs.
6. Provide literature on the Springs and on resident wildlife (birdlist)
7. Improve restroom facilities
8. Provide drinking water
9. Construct more viewing areas from the boardwalk to the Springs
10. Have picnic facilities available
11. Need more benches and longer boardwalk
12. Allow bicycle/walking access to the Springs
13. Provide wheelchairs for handicapped visitors

Appendix VIII. Proposed Allotment/Reservation Program for Three Sisters Spring

(Revised 5/5/2015)

Forward

The following Proposed Allotment/Reservation Program for Three Sisters Springs was drafted very early-on in the study when it became apparent that some way of limiting users (swimmers and paddlecraft) was or should become a necessary management priority. The proposed allotment/reservation program was drafted as a potential entry portal to discussion by META (Manatee Ecotourism Association) and USFWS as a way to limit Three Sisters Springs users. META appeared to be the only well-organized group which represented many of the commercial interests using the Springs. They, therefore, seemed a logical choice to function as a partner with USFWS.

The study, Manatees, People and Three Sisters Springs, as well as the follow-up studies in February and March would provide additional data to better determine user numbers in developing a "reservation" system for the Springs.

No specific numbers were in mind for numbers of swimmers and/or paddlecraft using the springs, rather the proposal offered a way to begin discussions which could lead to a workable system of allocation.

A strictly regulated and monitored system as suggested would allow an in-water, visitor/manatee program to continue and could satisfy regulations of the ESA and MMPA. At the same time, economic impacts to tour operators would be minimized, sustainability of the ecotourism interest would be maintained, and the City of Crystal River could continue to benefit from the manatee presence.

In March, 2015 the Springs were temporarily closed to paddlecraft. This proposal now reflects this regulation change.

Users involved in the potential partnership: USFWS and META

Purpose: To develop a usable reservation /allotment program that would allocate agreed-upon user days and provide allocations of visitors to TSS compatible with acceptable manatee strategies and numbers of people.

Focus: To improve the visitor experience to TSS by limitations on swimmers. Such limitations are already acceptable practices in most National parks, wilderness areas, NWRs and other areas of exceptional national heritage or wildlife values. At present, degradation of the aesthetics of the "manatee experience" at TSS is occurring at a predictably downward rate. Awareness and appreciation of the iconic manatee cannot occur with an increasing number of water participants.

Best management practices, particularly for the endangered manatee, would dictate that workable constraints be placed on the number of swimmers currently using TSS. How to accomplish a system that will be workable for tour operators, private visitors, and the Crystal River NWR staff will not be easy, but it is imminently doable with partnerships between users and the wildlife management staff. It would be expected that META would be the lead non-governmental organization to initiate and develop a workable system.

System Requirements (during manatee season)

1. A system that is workable for all stakeholders,
2. A system that addresses the overcrowding problem at TSS,
3. A system that focuses on the rules and regulations which apply to an endangered species, in this case, the manatee,
4. A system which utilizes online information and methodologies for handling advance reservation for ecotourism users,
5. A system which can focus on specific numbers of swimmers allowed in TSS at any given time period,
6. A system which allows exchanges/trades of dates between tour operators or other vendors,
7. A system that allocates a specific number of "open slots" to USFWS for public-use reservations,
8. A system which provides for continuous monitoring for compliance,
9. A system which provides adequate monetary return to USFWS for maintenance, law enforcement, and administration. Passes, permits, and concessionaire fees can be part of such remuneration.
10. A system that provides continuous feedback to stakeholders on functionality, needed changes, or other communication for optimal system function.
11. A system that focuses on long-term sustainability actions to maintain the viability of a valuable ecotourism base.

A proposed framework for initiation of discussion

The following is based on a variety of systems used by the National Park Service (Yellowstone, Denali), the US Forest Service (intermountain west and north central states) and the USFWS at refuges throughout the country. Factoring in a number of concessionaires would be a new step in such a framework, but could be made usable through new online capabilities.

Step 1. Develop a framework for use during the manatee season, currently November 1 through March 31.

Step 2. Agree upon a time frame for operation assuming a sunrise to sunset schedule (or) 8 – 5 pm (or) 9-5pm (or) ?

Step 3. Allot time slots of I hour, 2 hours, or up to 4 hours for each operational day (See study results for time spent in the Springs by users)

Step 4. Set up a lottery or drawing system for each stakeholder (permit holder). META would oversee this phase and through negotiations with users determine an equitable system for the number of "slots" each user may be entitled to.

Step 5. Draw every time slot and allot to the respective stakeholders.

Step 6. Prepare spread sheets for each day, week, and month of manatee season so every stakeholder knows who holds what slots and when. There should be an understanding that time slots are subject to tides, weather, and manatees present in the Springs. If it would be necessary to close the Springs by USFWS, those slots would be lost.

Step 7. Each time slot becomes the "property" of each respective shareholder including those "open slots" assigned to or drawn by USFWS.

Step 8. Time slots could be traded and/or or exchanged by respective stakeholders, but every change would be required to be posted on the "manatee master reservation board".

Step 9. USFWS would handle their respective time slots or time periods independently since these slots would constitute the only slots "open" to the public and would represent slots needed to address the needs of visitors unable or unwilling to book through tour operators (stakeholders). These users would have the option of using this time slot with tour operators directly, with rental boat operators, or simply "go-it-alone" as wholly independent users. In any case, these users would be responsible for attending mandatory manatee briefings on manners and regulations, just as those booking through tour operators would be required to attend pre-tour briefings.

Step 10. Stakeholders (META members and USFWS) would know in advance who could operate on specific times and dates.

Step 11. Compliance with slotted times would be self-policing. Listings of how-to operate with this time frame system would be developed and distributed by META.

Step 12. With a system like this in place, USFWS would have the responsibility for developing a new educational component for use by both META and FWS. This component , an updated Manatee Manners and/or new material as needed would become a mandatory requirement of the program for every swimmer using TSS. Additionally, every user would sign a waiver of liability applicable to both META and USFWS.

<u>The Big Decisions</u>

1. What constitutes a "slot"? Based on observed times spent in TSS by swimmers , a time slot could be as little as one hour or as long as one-half day. The length of the time slot will be determined by what is practical and operable.
2. Slots could be drawn by a lottery system.

3. Every user (tour boat, boat operator, boat rental) would have the opportunity to obtain equitable numbers of slots based on number of time slots agreed upon. How these would be allocated would be agreed upon by META(as the primary partner) and other commercial users.
4. What to charge to enter the lottery/drawing? The cost needs to be sufficient to cover the cost of set-up, administration, etc. Additionally, a portion of this fee should go to USFWS for administrative costs.

Basically, drawing slots by stakeholders makes access to TSS available only to those operators/partners with special use permits. There are, however, many manatee swim/view opportunities available to the public or non-META members in Kings Bay. While discrimination can be argued, an allotment system is the only way of insuring limitations on visitors to TSS, and insuring the viability and sustainability of the manatee - - the keystone of the tourist industry. This system differs little from allotment/reservation systems in current and successful use throughout the ecotourism world.

With USFWS holding 25 percent (or a percentage to be decided) of the slots, there would still be access available to "private" users. This would diminish complaints that tour operators had taken over the manatee /swimmer business. It would be expected that the majority of complaints would come from non-META operators or from the private segment of the public who choose not to book a trip with a tour operator. This system would not exclude those users, but simply require them to plan ahead and reserve a slot through FWS - - and pay a fee.

The system would force out those "private" operators who currently do business without any USFWS permit.

Those purchasing and reserving a FWS slot would be free to use that reservation on their own, or to enter into an agreement with a local META captain and/or tour operator to use that slot time by "hiring" someone for transport and equipment use .

Assumptions and Examples:

1. Time slots: Assuming a time slot of one hour during the manatee season (Nov. 1 to March 1), from sunrise to sunset (generally 10 hours) there would be 1,210 slots available for lottery.

Example:	November 2015	30 days	= 300 hour slots
	December 2015	31 days	= 310 hour slots
	January 2015	31 days	= 310 hour slots
	February 2015	29 days	= 290 hour slots
		Total	1210 hour slots
Less 25 percent USFWS			302 hour slots
For META and partners use			908

One-hour slots are used here only for example.The time slot length would ultimately be determined by the partners/stakeholders

2. Drawing : Software would be developed which would assure a fair and random selection of slots for every stakeholder.

Administration and oversight

The allocation system and "slot" system would be developed by META in cooperation with USFWS. Software would be developed so that all dates during the manatee season would be instantly available to every stakeholder, or even the public through smartphone or i-pad apps.

Funding

Funding sources to consider in developing the system could come from:

1. META- developed fees for each boat captain, tour operator, or rental business,
2. Contributions from the city of Crystal River, a primary beneficiary,
3. USFWS as a working partner providing educational materials used by all stakeholders,
4. Chamber of Commerce or visitors bureau would be expected to contribute at least in-kind services for establishing and promoting an on-line reservation system that would benefit every ecotourism business,
5. The state economic development agency would be expected to play a partnership role in this new and revamped ecotourism effort through direct grants and/or sharing on-line resources.

Slot time lengths and the USFWS allotment

Time intervals for use by META shareholders given in the previous sections are intended as a starting and/or talking point only. Based on data currently available from the ongoing research study at TSS, swimmers and paddlecraft normally spend less than one hour in the springs - - often much less. What constitutes a usable, workable and fair time allotment should be discussed and determined by the stakeholders. The study, Manatees, People and Three Sisters, found the average in-spring time for swimmers was 33 minutes. If at some time, a land-based access is provided, an hour to get into the Springs, swim with manatees, and get out before the next time slot should be adequate.

An allotment of time slots for USFWS is necessary in order to provide times for the public who choose not to use private vendors, i.e. those who cannot afford the costs involved or those who have all the resources to stage their own trip

In no case should "private" users be absolved of the requirements imposed on other users. Mandatory education and/or proficiency requirements would still be a requirement for private users. How these requirements would be made available and enforced would be the task of the stakeholders to devise. It should be noted that many public and private agencies in many areas of the country require a minimum

of educational exposure to the target animal and/or area before granting permits for travel or use. While considered a “governmental” burden initially, such systems are accepted over time with few complaints. Most importantly, such rationing or allocation systems become the only method of preserving the aesthetic qualities and long-term viability of the ecotourism target be it animal or place.

TSS is at a critical juncture in its evolvement as a world class marine mammal attraction. Current use is untenable and incompatible with long-term viability of both manatee and the ecotourism economy. Each stakeholder has been placed in a precarious position from the standpoint of litigation, economic sustainability and public opinion. The opportunity for a working partnership to begin solving these problems is now at hand, and could assure an acceptable future for the manatee.

Postscript

Shortly after we finished collecting data for this study, a new EA was issued by USFWS for Three Sisters Spring. As part of the new directives (regulations) the Springs Run was closed to paddlecraft until March 23, 2015. This left no way for paddlecraft to access the Springs. While these new rules solved the problem of excess boat traffic in the Springs Run and any subsequent effects on manatees and manatee passages into the Springs from paddlecraft, no options were provided.

It would be expected that this user group would file official complaints to the City of Crystal River and to USFWS. Whatever the outcome or decision for future management of the Springs, the preceding proposal for allotment would still remain as a valid methodology for providing a way to limit numbers, be it swimmers and/or boaters.